

Task-Method-Knowledge Toolkit for Spacecraft Launch & Payload Processing System, Phase I

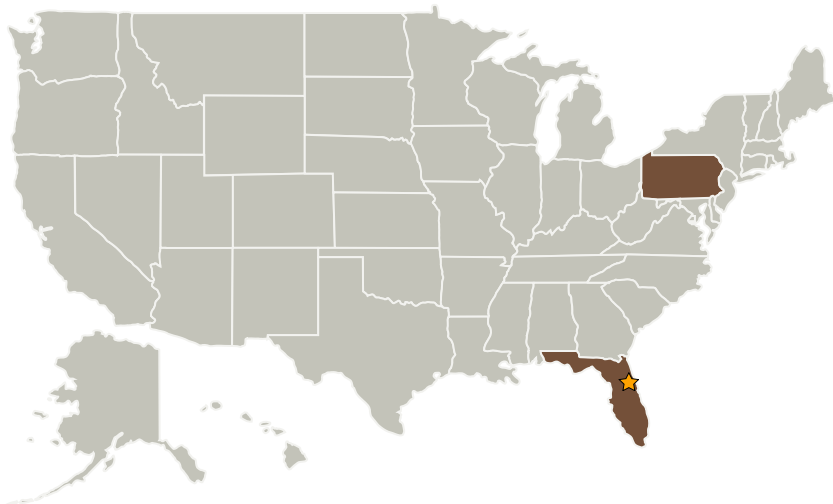
Completed Technology Project (2001 - 2002)



Project Introduction

The objective of this proposal is to investigate how DiscoveryTools™, a knowledge acquisition tool for capturing, representing and automating strategic knowledge, can be applied to spacecraft launch and payload processing (SL&PP). Primary focus will be placed on capturing knowledge and rationale for facilitating spacecraft launch and payload processing. DiscoveryTools allows process engineers to identify control processes. It also enables graphical display of the control processes and algorithms. This can, and should be, immensely useful for spacecraft launch and payload process engineers and operators. The DiscoveryTools interface allows the engineer to simulate and monitor a process as it executes, which means that needed changes can be identified and corrected without recoding. This potentially saves time and effort, and because the control process is explicitly represented as knowledge, it can be stored, manipulated, shared, and edited as knowledge. Here we investigate how DiscoveryTools™ can support SL&PP and how it can be enhanced to better support SL&PP in the future.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Kennedy Space Center(KSC)	Lead Organization	NASA Center	Kennedy Space Center, Florida
Discovery Machine, Inc.	Supporting Organization	Industry	Williamsport, Pennsylvania



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Kennedy Space Center (KSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Primary U.S. Work Locations

Florida

Pennsylvania

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Project Manager:

Jessica Mock

Principal Investigator:

Todd L Griffith

Technology Areas

Primary:

- TX12 Materials, Structures, Mechanical Systems, and Manufacturing
 - └ TX12.4 Manufacturing
 - └ TX12.4.4 Sustainable Manufacturing